



**IP over MPEG-2/DVB BOF**  
2-Way Services over DVB-RCS

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# Requirements for future WG work

- > According to the charter, requirements should consider the range of MPEG-2 based platforms currently (or anticipated to be) in use
  - **DVB-RCS based satellite meshed systems** are being developed (ESA/HISPASAT AMERHIS project, on-board Amazonas satellite to be launched in 2004)
  - these are **new systems**, like IPv6, which are badly supported by old solutions : this working group shall concentrate on this.
  
- > MPEG-2 satellite meshed systems must therefore be considered with the particularities they bring :
  - need for **security** of ptp & ptm links
  - need for **scalability** of connection control (lots of connections !) and PID distribution (lots of PIDs are being used !)
  
- > MPE has shown strong limitations w.r.t. this kind of systems
  - already highlighted during DVB-RCS standard definition
  - discussed on the IP/DVB mailing list
  - need for an addressing scheme

# Position wrt current I-Ds

## > Requirements I-D :

- requirements for duplex link layers (DVB-RCS) and meshed systems shall be added
- requirements for duplex security shall be added
- requirements for scalable & efficient multicast security and layer 2 control (connection control, PID assignment) shall be added

## > Encapsulation I-Ds :

- a kind a Service Specific Convergence Sublayer (as in some ATM AAL) shall be added :
  - it can be null
  - it can include SAR (Segmentation & Reassembly) function, in order to have a single SNDU per MPEG-2 packet
  - encasulation shall include description for MPLS and “connectionless” mode (like “IP-dedicated” as was discussed on the mailing-list)

## > Address resolution I-D :

- DVB-RCS proposal of Connection Control Protocol shall be evaluated and if necessary completed.

# Security

- > An Integrated Security Scheme for unicast/multicast MPEG-2 systems should be defined:
  - Current standard security defined for one way diffusion
  - Need for dynamic authentication & configuration
  - Layer 2 secure Data plane
    - Multicast & Multi-source aware
    - Based on strong algorithms
    - Per flow
  - Layer 2 secure Ctrl plane
    - Forward only & Bi-directional compliant
    - Scalable
  
- > FMKE I-D presented at MSEC